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The University of Southern Mississippi

HIGH-STAKES TESTING AND ITS RELATIONSHIP TO STRESS LEVELS OF
SECONDARY TEACHERS

by

Sonya Colman Christian

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

May 2010

ABSTRACT

HIGH-STAKES TESTING AND ITS RELATIONSHIP TO STRESS LEVELS OF SECONDARY TEACHERS

by Sonya Colman Christian

May 2010

This study investigated the relationship between high-stakes testing and the stress levels of secondary teachers in Jackson's Jackson Public School District. The independent variables of age, gender, subject taught, teaching experience, degree and school level were used to determine the differences of the various groups. A survey was piloted and used to determine teachers' levels of stress. There was not a statistically significant difference between the stress levels of teachers who teach subjects that are measured by high-stakes testing and those who do not. There also was not a statistically significant difference between the stress levels of veteran teachers and novice teachers. Finally, there was no statistically significant difference between the stress levels of teachers based on their school's assigned level.

Teacher demographic information was gathered via survey during the fall semester of 2009. There were 300 surveys sent out, and 140 were returned. The educators agreed that while high-stakes testing causes stress, it does not affect their self-efficacy.

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I would first like to thank God, my creator and redeemer, without whom I would not have persevered! Secondly, I would like to thank my parents who have been my most fervent supporters all of my life. Next, I would like to thank my husband and family. They have given up much to see me through this process, and last, but certainly not least, I would like to thank my committee chair Dr. Rose McNeese who believed in me when others did not and gave me the strength and reassurance to see this through to the end.

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Director

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CHAPTER I

BACKGROUND

As stated in the introduction to *A Nation at Risk* (Long, 1983), the minimal competency movement in public schools began in the United States as early as 1957 with the launching of Sputnik. The fact that Russian scientists were first to launch a satellite into space was alarming to U.S. leaders. Elected officials began to call for more scrutiny of America's education system. This began America's accountability movement in education.

Even before the No Child Left Behind Act of 2001, the publication, *A Nation at Risk*, published in 1983 by the United States Commission of Excellence (Long, 1983), opened a period of examination and evaluation of public secondary schools. The report found inadequacies in the U.S. public education system that it concluded was largely the result of the way the educational process was conducted. In order to combat these perceived inadequacies, minimal competency testing was established as a tool to improve education (New, 1996) and provide needed accountability at the state level.

Although such school reform efforts of the 1980s resulted in some nominal success, according to Johnson (2007) there were still achievement gaps that were related to gender, socioeconomic class, and ethnicity. Because of these pervasive gaps in achievement, modern school reform initiatives, which focus on accountability through standardized testing or high-stakes testing, became more popular. According to Cizek (2001), high-stakes tests are being used to assess teachers, students, principals, and entire school systems. However, this

raises the question of whether a single test is an accurate measure for these purposes.

High-stakes testing has received an enormous amount of attention in the United States. Rather than concentrating on educating and preparing students for careers, many schools have become consumed by test preparation. Donlevy (2000) added that this trend of relying on a single test, especially when it determines such important matters as graduation or matriculation through an educational setting, will begin to shut young people out from higher education and future opportunities. Also, in a profession that is already suffering a shortage, the accountability that high-stakes testing puts on teachers is further depleting the pool of qualified teachers. The strain of constant testing for data that are used to judge a teacher's performance is extremely stressful and quite often a great deal for educators to manage.

According to Eisner (2001), the strategy of using statewide testing to raise academic standards in most states has caused much debate. Lawmakers and educators agree that tests are important because they:

1. Indicate what students should be learning,
2. Identify gaps in a student's knowledge and skills,
3. Highlight the unequal achievement among diverse student groups,
4. And provide schools with data to modify instruction (Eisner, 2001, p.12).

However, over the last several years, the federal government has convinced the public that test scores, educational quality, and genuine learning are

synonymous terms. Eisner (2001) also asserted that the public is then reinforced in its view that test scores are good indicators of the quality of education that a school provides. Scholars do not argue that there are benefits to pacing what is taught. The problem comes with the predictability and control that such measures impose on students and teachers (Donlevy, 2000).

As shared by Johnson (2007), the effect of high-stakes testing is no more than the % carrots reinforcements and sticks punishments on learning+(p. 3) that B. F. Skinner (1951) discussed in his research. The *carrots* of today's educational system are school ratings that are deemed high or exceptional, while the *sticks* are the labels of low-performing that school districts receive. Johnson added that low-performing schools are often forced to make drastic changes, be taken over by the State Department of Education, or even closed. Also, schools are forced to compete with other schools in academic areas or have declining achievement reported by newspapers, which, in turn, publicly embarrasses low or under-performing schools (Donlevy, 2000).

The research of Skinner (1951) conversely asserted that positive reinforcement was more effective at changing and establishing behavior than punishment. His research was conducted in the 1950s when public education in the United States relied heavily upon the use of rote learning and punitive discipline. According to Skinner, attempts to motivate students and teachers with fear of failure are rarely effective. Instead of reaching the desired outcome, such tactics often induce stress and apathy.

Another problem with high-stakes testing is the narrowing of the curriculum. Unfortunately, high-stakes testing places a heightened concern with test data; thus, teachers are no longer concerned with discovering and fostering individual learning styles (Paris, 2000). Because teachers have been forced to directly parallel what is being taught to what is found on state mandated tests, they no longer feel the need to tailor their classrooms and classes to meaningful learning activities or stimulating learning environments (Donlevy, 2000). This is a disservice to students whose individuality is no longer cultivated. As educational mandates continue to multiply, teachers no longer have the time to search for and try to achieve the right conditions for meaningful educational activity. Donlevy shared (2000) that as state requirements increase and workloads mount, classrooms no longer reflect stimulating environments.

There has been much discussion that teachers, under the direction of their administrators, do anything to achieve the scores that are required. Jehlen (2003) reported that teachers are not teaching students to transfer knowledge, but are only teaching information that will be found on the test. He suggested that many school districts are not preparing students for other tests that measure broader, more holistic learning (Jehlen, 2003).

Johnson (2007) stated, "There is no data to support the contention that the use of such testing will enhance student learning or improve teaching" (p. 3). One study in particular that reinforced this point was one conducted by Johnson and Johnson (2002) which concluded that high-stakes testing makes teachers resent at-risk students; thereby, robbing these students of the assistance they need and

deserve because they may bring down a class's test average and the teacher's subsequent job security or salary advancement.

There are several ways in which high-stakes testing impacts teachers. With the new accountability movement, teachers feel more pressure for their students to obtain high test scores, resulting in new and higher levels of stress. When salary, professional status, and careers depend on test scores, teachers become anxious (Paris & Urdan, 2000). As a result, the increased pressure on first year teachers to produce positive test results heightens the stress in an already stress-filled first year (Johnson, 2007, p. 5).

Statement of the Problem

Kyriacou (2001) suggested that researchers examine the relationship between teacher stress and high-stakes testing and accountability mandates. This study explored the stress levels of teachers with and without standardized testing responsibilities to determine if veteran teachers experience more stress than novice teachers due to high-stakes testing.

Research Questions

This study was guided by the following research questions that was measured from a research survey:

1. Do teachers who teach subjects tested by high-stakes tests have more stress than those teachers who do not?
2. Does self-efficacy affect a teacher's stress level as it relates to high-stakes testing?

3. Does the number of years of teaching experience affect a teacher's stress level as it relates to high-stakes testing?

This study tested the following hypotheses:

- H1: There is a significant difference in the stress levels of teachers based on their schools assigned level of performance.
- H2: There is a significant difference between the stress levels of teachers who teach subjects that are measured by high-stakes testing and those who teach subjects that are not.
- H3: There is a significant difference between the stress levels of veteran teachers and novice teachers with regard to high-stakes testing.

Definition of Terms

Core subject - For the purpose of this study, core subject refers to any subject taken in high school that is needed for graduation or any state mandated tested subject.

High-stakes testing - Using federally and/or state mandated testing for use as a basis for promoting students from grade to grade, awarding high school diplomas, assigning students to remedial classes, allocating funds to school districts, rewarding merit pay to teachers, dismissing teachers for substandard student performance, and evaluating school progress. High-stakes tested subjects are usually math and English or language arts (Barksdale-Ladd & Thomas, 2000; Madaus, 1998).

Job stress - A condition where job-related factors interact with the workers to change their psychological or physiological condition such that they are forced to deviate from normal functioning (Beehr & Newman, 1978).

No Child Left Behind - Federal legislation that mandates the improvement of the academic performance of every child. Schools that fail to fulfill accountability standards must provide supplemental services to students. This law invokes penalties for failing to sustain adequate yearly progress (U. S. Department of Education, 2002).

Novice teacher - For the purpose of this study, a novice teacher is defined as a teacher with 5 years or less of teaching experience.

School Performance Classification - A value or label assigned to a school based on "achievement and growth. That is, based on the school's performance on both the achievement model and the growth model. Note: There are five school performance classifications: 5 = Superior Performing, 4 = Exemplary, 3 = Successful, 2 = Under Performing, and 1 = Low Performing (Mississippi Department of Education, 2008 p.2).

Secondary school - For the purpose of this study, secondary school refers to schools serving any combination of grades 6-12.

Self-efficacy .

A person's beliefs in his or her capabilities to exercise control over his or her own functioning and over events that affect his or her life. Beliefs in personal efficacy affect life choices, level of motivation, quality of

functioning, resilience to adversity and vulnerability to stress and depression. (Bandura, 1994, p. 80)

Standardized achievement test - A test constructed under detailed specifications, administered under standardized conditions, and scored according to specific rules.

Stress - %Disequilibrium within the intellectual, emotional, and physical state of the individual; it is generated by one's perception of a situation, which results in physical and emotional reactions. It can be either positive or negative, depending upon one's interpretations+(Gold & Roth, 1993, p. 17).

Teacher stress - %The experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration, or depression, resulting from some aspect of their work as a teacher+(Kyriacou, 2001, p. 28).

Veteran teacher - For the purposes of this study, a veteran teacher is defined as a teacher with 6 or more years of teaching experience.

Delimitations

1. The study was limited to secondary teachers in a selected school district.
2. The statistical findings were limited to the opinions of the teachers in the selected school districts.

Assumptions

The only assumption of the study was that the participants in the study responded to the survey honestly.

Justification

While there has been some research on teacher stress, there is very little focus on the effects of standardized testing on teachers. This study contributes to the body of knowledge about teacher stress associated with high-stakes testing among secondary teachers. With the increase in educational reform initiatives in the United States, there is a clear need for understanding the relationship between assessment and accountability and teacher stress.

Identifying and subsequently decreasing teacher stress related to high-stakes testing would likely increase teacher retention and thereby decrease the shortage of highly qualified teachers (Berger, 2006). Further, this study should assist in the awareness of teacher stress, thereby creating some progress towards a positive change.

Hopefully, the results of this study will serve as a guide for instructional leaders and teachers facing the imperative task of coping with the stress of high-stakes testing to improve learning.

CHAPTER II

REVIEW OF THE LITERATURE

Theoretical Framework

Researchers began studying the effects of high-stakes testing on teacher stress levels more than 30 years ago (Kyriacou & Sutcliffe, 1997). In the 1970s, researchers began to connect stress to self-efficacy and job satisfaction.

The self-efficacy component of the social cognitive theory by Bandura (1977) greatly influenced the tenants of this research. In this context, *perceived self-efficacy* is defined as the confidence in one's coping abilities and the beliefs that people are capable of meeting the expectations of their jobs at designated levels of performance which, in turn, influence their lives (Bandura, 1994). Bandura (1994) also asserted that beliefs about self-efficacy determine how individuals act, feel, think, and motivate themselves. The construct of Bandura's research is not domain-specific; rather, self-efficacy aims at the broad and stable sense of confidence that helps people deal with a variety of stressful situations (Hughes, 2006). Therefore, Bandura's concept of self-efficacy is relevant to the educational setting.

Bandura (1994) identified four sources affecting self-efficacy:

1. Mastery experiences,
2. Physiological and emotional states,
3. Vicarious experiences, and
4. Social persuasion (p. 28).

Bandura (1994) agreed that a teacher's sense of efficacy was not necessarily consistent across the various types of tasks that he or she performs.

Tschannen-Moran and Hoy (2001), in a similar study, concluded that teacher efficacy has proven to be powerfully related to many meaningful educational outcomes such as teachers' persistence, enthusiasm, commitment and instructional behavior, as well as to student outcomes such as achievement, motivation, and self-efficacy beliefs (p. 783). They also argued that many educational outcomes such as teachers' persistence, enthusiasm, commitment, and instructional behavior result from powerful teacher efficacy. Bandura (1994) went on to assert that persons who believe that they will succeed build a resilient sense of efficacy.

A teacher's self-efficacy is related to the teacher's competence, which Villarreal (2005) defined as the sum of:

1. A strong knowledge base of content and pedagogy,
2. A sense of self-efficacy,
3. Reasoning skills to make informed individual decisions,
4. An ability to evaluate, and
5. Adjust decisions (p. 2).

Other research by Bandura (1994), in the general field of occupational stress, and, more specifically, in the study of teacher stress, suggested that self-efficacy can be a mediating factor and an enhancement for human accomplishment and personal well being. Self-efficacy determines how people feel, think, behave, and motivate themselves. In the workplace, this confidence can help to keep stress

levels low and intrinsic interest in one's job high. Those who doubt their own capabilities may view difficult tasks as personal threats while those with high levels of self-efficacy embrace them (Bandura, 1994).

This sense of self-efficacy can be especially important in the study of teacher stress. According to Pajares (1997), teachers who are confident that they can get the job done well will inevitably feel better prepared in their work and less stressed with regard to the pressure to perform. Teachers with low efficacy may believe that situations are worse than they really are, which leads to stress, depression, and a narrow vision of how to achieve success. High self-efficacy, on the other hand, helps foster tranquility in approaching difficult tasks and activities such as high-stakes testing.

History of the Accountability Movement

Standardized tests, used to measure the effectiveness of a standards-based educational system, will always be an integral component of public schools in the United States (Poiter, 2002). Using these tests to measure student achievement and school performance is not a new concept, and its uses have increased exponentially since the educational reform efforts of the 1970s (Linn, 2005). As early as 1965, with the passage of Title I of the Elementary and Secondary Education Act (ESEA), federal legislation has tied funding to school effectiveness and the attainment of educational standards. For the past 30 years, state and federal politicians have become progressively more actively engaged in the affairs of public education; this has led to advocating for increased use of standardized tests to assess school effectiveness based on student achievement

(Amrien & Berliner, 2002). The 1965 ESEA led to the birth of the minimal competency testing movement of the 1970s, which grew into the accountability movement of today.

In the 1980s, Berger (2006) reported that Ted Sizer's *Horace's Compromise: The Dilemma of the American High School* sparked yet another educational campaign. In his book, Sizer revealed the results of a 5-year study of public high schools in the United States. He found that American high schools offered too many classes during too many periods (Berger, 2006). Sizer argued that high schools were poorly organized which led teachers away from individualizing their instruction and towards mediocre teaching (Berger, 2006). His portrait of Horace Smith added to a common theme that secondary education at that time was in a state of apathy and disorganization and needed restructuring and reconstituting.

Sizer's assertion led to the formation of the National Commission on Excellence in Education, which was made up of governors from across the United States. The committee commissioned the report entitled *A Nation at Risk* (Long, 1983) based on the governors' findings. This report renewed the public's scrutiny of its high schools. *A Nation at Risk* concluded that educational performance as a whole in the United States was on the decline because of inadequacies in the way public education operated. The commission recommended that American public schools change their graduation requirements and adopt more rigorous and measurable standards and that citizens hold educators responsible for achieving necessary reforms (National Commission of Excellence in Education, 1983).

With the release of *A Nation at Risk*, standardized testing became more prevalent and the results became ever more coupled to penalties beyond the test report. Standardized tests became the staple of educational policy makers in their pursuit to raise and preserve high standards (Natriello & Pallas, 1998). Amrein and Berliner (2002) observed the commission's advice that states establish elevated standards to regulate and improve curricula and that the states also conduct meticulous assessments to hold schools liable for meeting those standards. The reports on student achievement made available through extensive testing have been integrated into the arguments of school finance reform advocates who point to meager patterns of performance among students in certain areas as verification to support claims that certain public schools, characteristically those serving urban and minority adolescents, are not sufficient enough to meet the needs of the students they are supposed to provide with authentic educational opportunities. Because of this, Perrone (1989) communicated the need for research on the accountability movement, and high-stakes testing becomes apparent as the literature on high school restructuring is limited and lacks sufficient descriptions of school practices. Part of the problem, Perrone insisted, is because of the wide spread differences among high schools in the United States. Following *A Nation at Risk*, state and federal governments began crafting policy that called for higher standards, accountability, and testing designed to improve public education.

In the last quarter of the 20th century, accountability testing developed as a major tool for policy makers to regulate public education in the United States

(Natriello & Pallas, 1998). This movement became problematic when these regulatory laws were often used by federal and state governments to circumvent local school districts to implement changes, thus exerting control of education through testing and the promise of accountability (Paris & McEvoy, 2000). The push for accountability in schools has led to statewide assessments becoming truly %high-stakes+when school quality, teacher competence, and individual student capability are judged by test results. This clear focus on student achievement and institutional accountability became a signal of a new era in educational reform (Henig, Hula, Orr, & Pedescleaux, 1999).

Accordingly, the passage of the No Child Left Behind (NCLB) Act in 2001 propagated the focus on accountability, mandated the use of statewide testing, and required states to bring all student groups to proficient levels on state reading and mathematics tests by 2014. NCLB holds schools and school districts responsible for making adequate yearly progress toward this goal (Clarke & Gregory, 2003). Students are tested at regular intervals throughout their academic careers to measure student achievement. NCLB's intent was to provide educational opportunities for all students to meet their highest potential and contribute to society (Vaughn, 2002). It mandates specific annual yearly targets for different ethnic groups, English language learners, and students with disabilities. Because of NCLB, states began to raise academic standards and attach politically acceptable benchmarks to the high school diploma (Manset & Washburn, 2000). This testing, theoretically, would lead to a greater focus on diagnostic instruction and an increase in assessment and accountability.

High-Stakes Testing and its Purpose

According to New (1999), the purpose of early accountability movements, which later became high-stakes testing, was to (a) measure pupil performance in basic subjects, (b) provide teachers with data to be used to instruct students, (c) identify students who fail to achieve mastery or make progress towards mastery, and (d) identify school districts that fail to reach their goals of student achievement. According to Corbett and Wilson (1991), standardized tests have become commonly used as the basis for promoting students each year. Davis and Wilson (2000) noted that high-stakes testing is used in many districts as a means of teacher motivation and as a way to help teachers develop their skills and effectiveness. Amrein and Berliner (2002) reported that 1983's *A Nation At Risk* recommended that high-stakes testing be used to improve the nation's public schools' curricula and that rigorous assessment be conducted to hold American schools accountable for meeting those standards. Finally, a goal of NCLB was to decrease the achievement gap between American public schools and to ensure that adequate yearly progress was made toward this goal by use of high-stakes testing (Linn, 2005).

An integral part of accountability and school reform has been high-stakes testing, which is the use of student scores on standardized tests as a principal factor in school-level decision making, teacher evaluation, and student promotion (Amrein & Berliner, 2002). The term *high-stakes testing* is used to describe tests that determine whether students are promoted to the next grade, required to attend summer school, assigned to remedial classes, and allowed to graduate

from high school; whether schools receive funds; or if teachers are awarded merit pay (Berger, 2006; Clarke & Gregory, 2003; Jacobson, 2005). The assumption is that rewards and consequences attached to rigorous tests will motivate students to learn or at least motivate teachers to teach (Kornhaber & Orfield, 2001).

Before NCLB, teachers' involvement with mandated testing was minimal. They distributed and collected testing materials and ensured that tests were administered in a uniform manner (Paris & Urdan, 2000). However, as test results became a matter of public record for comparative measures of teacher and school effectiveness (Paris & Urdan, 2000), teachers have a greater stake in the outcome of their students' scores.

Pros of High-Stakes Testing

A key theory of the accountability movement was that testing would lead to improved teaching (Elmore & Furman, 2001). Popham (2001) explained that experts distinguish test preparation as either curriculum based, which provides an effective focus to teaching, or test-item preparation, which does not. One study showed that in Georgia test preparation served as good teaching and raised student test scores in metacognitive reading and writing strategies (Zigo, 2001). Paris (2000) reported a study of 19 Chicago elementary schools that negated the belief that standardized testing requires teaching to be reduced to the drill of test items. Paris' (2000) study found that challenging, authentic assignments were also effective test preparation.

For instance, proponents of high-stakes testing make certain assumptions including:

1. Students will work harder and learn more when they have high-stakes tests.
2. Students are motivated to do their best and score well on high-stakes tests.
3. Doing well on high-stakes tests leads to feelings of success and doing poorly leads to increased effort for learning
4. Students and teachers need high-stakes tests to know what is important to learn and to teach.
5. Teachers need accountability through high-stakes tests to motivate their teaching or they would not work hard.
6. High-stakes tests are good measures of an individual's performance and are affected little by differences in students' motivation, interest, emotionality, language, and background.
7. Tests are a level playing field and provide an equal opportunity for all students to demonstrate their knowledge.
8. Parents understand high-stakes tests and how to interpret their children's scores.
9. Teachers use test results to help provide better instruction for individual students, and administrators use test results to improve student learning and professional development of teachers.

10. High-stakes tests are good measures of the curricula that students are taught in school. (Paris, 2000, p. 4)

However, such assumptions are not supported by research. To the contrary, numerous studies have found the opposite effects for many of these assumptions (Paris, 2000).

Cons of High-Stakes Testing

The high-stakes or accountability movement is plagued by problems. Although high-stakes tests have problems, test advocates do not want to publicize these shortcomings because they have become powerful tools for education reform, tools that leverage money, sanctions, curricula, and public esteem for schools (Paris, 2000). Leithwood and Atkin (1995) asserted that high-stakes testing has resulted in a narrowing of the curriculum, thus trivializing it, rather than improving teaching, which was its original intent. The paradox is that standardized testing conditions may actually impede many of the collaborative learning strategies that research has indicated are effective for student learning, strategies many teachers provided prior to testing mandates. In fact, as currently implemented, it is more probable that even if high-quality teaching is occurring, it will not result in higher test scores (Paris & Urdan, 2000). High-stakes testing has created excessive stress for students, parents, and teachers alike, yet it has not been demonstrated that high-stakes testing is effective in improving student performance (Hughes, 2006).

Furthermore, according to Paris and McEvoy (2000), too often high-stakes tests are used by lawmakers to issue mandates because they feel that teachers

cannot be trusted to work hard unless they are subjected to external evaluation. A major problem is in the thought that these tests will improve student achievement through increased teacher accountability because this premise has not yet come to fruition (Kohn, 2000; Popham, 2001). It is thought that when tests are associated with rigorous standards, they can either persuade educators to advance the quality of their curriculum and instruction or the pressure to raise scores can lead to teaching to the test (Madaus, West, Harmon, Lomax, & Viator, 1992) and cheating scandals (Clarke & Gregory, 2003).

Smith (1991) and Jones, Jones, Hardin, Chapman, Yarbrough, and Davies (1999) concluded that the publication of student test scores in the media has created anxiety, embarrassment, and shame among teachers. The media more often criticize school failures but provide limited or no coverage to report school success. Describing the aftereffects of publishing student test scores, Dyck (2002) observed:

No one will ask whether the teacher did her best with the crew of kids she had or the teaching time he was allotted. No one will ask whether there is a connection to the curriculum or what was done in the previous grades or students' enthusiasm in the final weeks of the school year. No one will ask how far the kids came during the year or whether they became more confident in their ability to learn. All the public will see is the bottom line—the score. (p. 2)

For example, schools that repeatedly have poor scores are labeled, forced to make drastic changes, and taken over by the state (Jacobson, 2005). The

problem is that standardized achievement tests measure the factual knowledge of students regarding academic subjects. They do not, however, measure the quality of teachers or schools, only, according to Paris and Urdan (2000), their distribution of smart students. A considerable body of literature (Kohn, 2000; Popham, 2001; Sacks, 1999) suggested that the use of standardized tests as the sole measure of student achievement is an inadequate measure of school effectiveness.

Next, high-stakes tests result in narrowing the curriculum. Test administration results in negative emotional feelings on the part of teachers required to administer them, and this greater focus on test prep may even have a deleterious effect on the delivery of instruction (Smith, 1991). Although such tests may have benefits, stringently defining what children learn from year to year imposes a constricted approach to learning with grim outcomes (Donlevy, 2000).

A large body of scholars believes that the emphasis on standardized testing has caused the quality of instruction to suffer, especially for poor and lower-functioning students. These students are largely ignored, and their individual gifts are not nurtured if they are not in tested areas (Donlevy, 2000).

Berger (2006) found that high-stakes testing has changed teachers' style of teaching and the content they cover in the courses they teach. High-stakes testing begets test-driven classrooms that tend to exacerbate boredom and fear, promoting mechanical behaviors on the part of teachers, students, and schools, and bleed schoolchildren of their natural love of learning at an early age and teachers of their love of imparting knowledge (Amrein & Berliner, 2003).

Because teachers are instructed to teach to the test (Paris & Urdan, 2000), high stakes testing has put some of the most meaningful class experiences in jeopardy (Mirshah-Bayer, 2003). Mirshah-Bayer (2003) explained that teachers are not teaching students to transfer knowledge; they just want them to be able to answer questions similar to those on the state test. Additionally, such styles of teaching do not prepare students for other tests such as the American College Test (ACT) and the Scholastic Aptitude Test (SAT) (Jehlen, 2003).

Unethical teaching and testing practices are other outcomes of the high-stakes testing/accountability movement (Ligon, 2000). Many teachers feel pressured to cheat. Thus, some school administrators and teachers will do anything they can to achieve the scores they need. Ligon (2000) described such unethical practices as teaching from previous years' tests for practice, teaching only test vocabulary, not adhering to time constraints during test administration, suspending weak students during testing days, and instructing test proctors to tell students when they have marked incorrect answers or pointing students to the correct answers during test administration. Ligon (2000) also reported that increasing numbers of teachers are engaging in unethical practices such as preparing students for the test by pointing out miss-marked answers or erasing incorrect answers (Paris & Urdan, 2000). Media reports of teachers who are fired for tampering with test scores lower the public's trust in teachers rather than the tests (Paris, 2000).

Paris (2000) asserted that the control for assessment has become political, and state officials from all levels, including the governor's office, have used test

scores to exercise control over teachers, curricula, and instruction. An additional problem has manifested in the way the results of high-stakes tests are interpreted. Some look at raw scores and judge districts without looking at growth, while others look at the scores and judge without knowing what is truly being measured. A growing body of research argues that high-stakes tests fail to measure anything other than superficial thinking (Kohn, 2000; Smith 1991). According to Paris and McEvoy (2000), there are several uncontrolled factors that may change or distort a test's findings. A 1999 National Research Council report (Finnernan, 1999) found that critical decisions about individual students were sometimes made on the basis of a test score even when the test was not designed for that purpose. It is difficult to interpret data from high-stakes tests, and the public does not recognize this.

Stress

Stress is a natural part of life that cannot and should not be completely eliminated because to do so would prevent humans from reaching their full growth potential (Ford-Martin & Frey, 2005). There are two types of stress: the good kind that allows humans to be productive, and the bad kind that leads to depression and disease. Good and bad stress can be identified as either eustress or distress; good or bad.

Eustress is the good stress that motivates an individual to continue working (Brock University Student Health Services, 2006). Stress can be a motivator and provide incentive to get the job done. Eustress can also be identified as the well-done feeling one receives when a project is complete. Everyone needs a little

stress in his or her life in order to continue to be happy, motivated, challenged, and productive. It is when this stress is no longer endurable that distress comes in.

Bad stress, or distress, exists when good stress becomes too much to handle. According to Brock University Student Health Services (2006), distress is characterized as when tension builds, when there is no longer any fun in the challenge, when there seems to be no relief, and when there seems to be no end in sight. This is the kind of stress most teachers are familiar with, and this is the kind of stress that leads to poor decision making. Not only are increased blood pressure, rapid breathing, and generalized tension physiological symptoms of distress, overeating, loss of appetite, drinking, smoking, and negative coping mechanisms are behavioral symptoms of stress (Brock University Student Health Services, 2006).

All humans benefit from a certain amount of stress because stress actually improves performance. Humans require adequate pressure to encourage them to perform creatively and effectively (Hughes, 2006). The problem arises, however, when stress is excessive and not handled properly, then it has an adverse effect. Excessive pressure can lead to distress, feelings of oppression and harassment, and collapse (Hughes, 2006).

Stress results in an increased production of adrenaline and hormones that temporarily prevents normal body and cognitive functions (Hughes, 2006). According to Sabatino (2004), health and disease are related to how humans respond to stress in everyday activities. Selye (1974), on the other hand, looked

at stress from a social perspective. He found that stress is caused by physiological, psychological, and environmental demands. He further stated that stressors cause the body to create extra energy, which is not completely expended. Not expending the extra energy the body creates is referred to as the General Adaptation Syndrome (Seyle, 1974) which has three stages: (a) alarm reaction, which is when the body is alerted and activated with stress levels at their highest; (b) stage of resistance, which is when the body's defenses attempt to adapt to the increased level of energy in the system reducing stress levels somewhat in the beginning, but gradually letting them increase; and (c) stage of exhaustion, which is when the body's defenses against stress become depleted and a mental and physical breakdown becomes imminent. At this stage, performance plummets and illness often occurs.

In a 2005 study, Ford-Martin and Frey discussed the relationship between stress and illness. They concluded that a mix of personal, interpersonal, and social variables are the main risk factors for stress-related illnesses. Examples of these factors include, but are not limited to, feelings of helplessness, hopelessness, extreme fear or anger, cynicism or distrust of others, no control over one's physical environment, and/or loss of social support networks.

In an earlier study, Bradshaw (1991) described symptoms of stress in three areas: physical, behavioral, and emotional. Physical stress is characterized by feelings of discomfort in the body (back, neck, and shoulders), sleeplessness, heartbeat irregularities, fatigue, weight change, panic attacks, etc. Emotional stress, on the other hand, is characterized by increased feelings of anxiety, fear,

depression, nervousness, and difficulty in making decisions. Finally, behavioral symptoms, according to Bradshaw, (1991), include frustration, poor personal habits, lateness, and substance abuse. Cunningham (1983) and Friedman (1995) identified symptoms of burnout, which is how most teachers describe their stress, as fatigue, insomnia, negative personal attitudes, feelings of failure, and negative feelings toward students.

Since stress is biological in nature, this kind of job-related stress can cause not only emotional but physical harm (Black, 2003). When the brain senses stress, the hypothalamus alerts the pituitary gland, which in turn signals the adrenal glands to secrete the hormone cortisol and other substances (Black, 2003). Chronic stress or extreme stress can trigger the release of too much cortisol, and that can spell trouble. Excessive cortisol destroys brain cells in the hippocampus, resulting in short-term memory impairment, rapid weight gain, irritability and other mood problems, high blood pressure, and fatigue. The American Institute of Stress has documented more than 50 common symptoms. They include: headaches, back pain, frequent colds, heartburn, anger, depression, eating disorders, and insomnia. These are just a few of the signs that develop before the appearance of more serious physical illnesses such as hypertension and heart disease (Hughes, 2006).

According to Black (2003), for some teachers, manifestations of stress are physical as well as psychological, including headaches, chronic pain, colds, heartburn, anger, and depression (Crute, 2004). Wiley (2000) found that teacher stress could have detrimental effects on teachers, their students, and the

learning environment. This stress may lead to emotional exhaustion, fatigue, negative attitudes toward students, and feelings of diminishing job accomplishment.

Physical effects can include headaches, fatigue, ulcers, upset stomach, and insomnia as well as more serious nerve disorders, increased heart rates, and cardiovascular disease (Hughes, 2006). Psychological effects often include outbursts of anger, bouts of depression, unremitting tension and anxiety, confusion, indecisiveness, and constant worry. Serious stress in teachers can lead to panic attacks and lingering feelings of inadequacy (Hughes, 2006).

High-Stakes Testing and Teacher Stress

Surveys and discussions reveal that reports of teacher stress are increasing, especially when correlated with the day-to-day activities and administration of modern schooling. Black (2003) suggested that stress has become common among teachers: "They admit to feeling anxious and apprehensive--especially about meeting the mounting needs of troubled students, doing justice to an all-consuming curriculum, and getting kids ready for a relentless series of tests+(p. 36). Because of poor test results, teachers can quickly experience doubt regarding their own abilities and in the quality of preparation that they received prior to certification (Hughes, 2006).

One of the earliest mentions of the term *teacher stress* is found in the work of Kyriacou and Sutcliffe (1997). They defined teacher stress as a work experienced by a teacher that can be considered by that teacher as unpleasant, thus evoking negative emotions such as anger, anxiety, tension, frustration, or

depression. According to Nagel and Brown (2003), there are times that stress cannot be avoided, but an individual teacher's perceptions based on his or her experiences can negatively or positively affect the degree of stress experienced. Davis (1999) also asserted that there are significant variations in the way that individuals perceive and cope with stress.

While teaching has traditionally been regarded as a stressful profession (Hodge, 1994), research reports that accountability and high-stakes testing has greatly impacted teachers' levels of stress through pressure, pedagogy, and content (Groves, 2002; Johnson & Johnson, 2002; Murillo & Flores, 2002). Teachers are led to believe their jobs are at stake if their students' scores do not rise each year (Hoffman, Assaf, & Paris, 2001).

Research also reported that teachers have experienced pressure from external mandates relating to high-stakes testing. For example, in some states, teachers' evaluations and salaries may hinge on student test performance (Jacobson, 2005). With the inception of NCLB, high-stakes tests are more or less the sole means of describing and judging schools in America; thus, administrators pressure teachers to produce because they are ultimately held accountable for student performance (Hughes, 2006). In fact, teachers have become subject to dismissal based on low student performance on high-stakes tests and school sanctions for substandard test performance (Barksdale-Ladd & Thomas, 2000; Madaus, 1998). This inability to direct one's own stress toward a solution, according to Graves (2001), is a major factor in increasing stress; this perpetuates its escalation. Because teachers are made to feel anxious about

testing and are made to feel stress from the emotional impact of these high-stakes tests on students, many find themselves determined to do whatever is necessary to avoid such feelings in the future (Smith, 1991). An additional layer of stress producing pressure was experienced when the Massachusetts Board of Education voted to test math teachers in their subject area if more than 30% of their students fail the math portion of the state assessment tests (Jacobson, 2005).

Paris and Urdan (2000) expressed concerns that standardized test scores may not measure what students have actually learned. For instance, in some cases, teachers may do an excellent job of teaching students valuable information and skills, but if the skills are not measured on the high-stakes tests, their students' low scores will reflect the lack of alignment between what is actually taught with what is tested (Paris & Urdan, 2000). Teachers are forced to choose whether to prepare their students for the goals of the curriculum or the criteria provided by the test.

Highly qualified teachers today have begun to feel alienated because of the accountability of high-stakes testing. Poor test results cause teachers to experience doubt regarding their own abilities and in the quality of preparation that they received prior to certification (Hughes, 2006). Rather than dealing with the loss of self-efficacy, many teachers choose to leave the profession. A study conducted by Paige Thompkins (as cited in Tye & O'Brien, 2002), which profiled teachers leaving the profession, using data from the National Center for Education Statistics, stated that teachers ranked accountability as their number

one reason for leaving. Teachers reported that because teaching to the test had become the prominent pedagogy in the nation's schools, the work environment itself ultimately became unbearable (Tye & O'Brien, 2002).

This phenomenon does not occur only with veteran teachers. Beginning or inexperienced teachers usually come into the profession enthusiastic and full of ideals. Young teachers believe, before their first year, that they can change the world. Even teachers who have graduated from university teacher education programs feel unprepared and frazzled. Ashton (1996) reported that 30% of teachers surveyed after one year of service said that they did not believe that they had been adequately prepared to teach students from a variety of backgrounds, and 15% abandoned the strong belief that they could make a difference in the lives of their students.

Teacher opinion regarding high-stakes testing is fairly consistent. In general, they believe that there are too many tests, the public misuses the results of these tests, and the tests are unfair to minorities (Paris & Urdan, 2000). Kohn (2000) claimed that teachers who serve lower income students and minorities reported extreme stress to have their students perform well on high-stakes tests. According to Berger (2006), teachers have reported increased pressure to prepare their students to perform well on tests whether their students are academically equipped to do so or not (Berger, 2006). He argued that this stress has resulted in teachers employing low-level skill and drill content to achieve the highest scores possible on the test.

Even though teachers teach from a standardized, mandated curriculum and also administer the high-stakes tests, their personal beliefs about how students should learn and be assessed often oppose the policies they must enforce (Kellaghan, Madaus, & Airasian, 1980). Administrators often encourage drill-based instruction and teachers to teach to the test, which often places increased pressure on teachers (Darling-Hammond & Sykes, 2003; Patterson, 2000). Consequently, the conflicting personal beliefs of teachers and the mandates of their administrators and school districts have resulted in high levels of pressure and stress (Jones, Jones, Harden, Chapman, Yarbrough, & Davis, 1999). Jarvis (2002) found that teachers lack of power and autonomy over what they teach was a contributing factor of stress directly related to their increased accountability. Because of these factors, teachers must learn how to work in stressful environments (Johnson & Johnson, 2002).

While all schools are judged by their ability to perform well, more pressure is put on poorly performing schools that have been identified as failing on the basis of standardized testing performance. The pressure to increase test scores is viewed as a major source of stress for all teachers, but it particularly affects teachers working in poorly performing schools (Hughes, 2006). It is hard for teachers to deal with the overwhelming stigma of working at a school that has been labeled as a failing school (Berger, 2006). Because teachers are held accountable for student achievement, they feel pressured to increase student test scores, sometimes fearing that their careers are jeopardized if their students

fail to record satisfactory progress on state tests and fulfill federal mandates for student progress (Backer, 2000).

Teachers who administer standardized tests are associated with those students and their scores. The publication of test scores produces embarrassment, guilt, and shame, and promotes anger among teachers (Ashton, 1996; Smith, 1991). The public, who may not know how to interpret test scores, inaccurately concludes that teachers are not particularly hard working and that the system is in disarray (Hughes, 2006). Feelings of pressure to perform well do not only happen to teachers from low-performing districts and schools, but teachers who teach in schools that are considered high performing feel great pressure to maintain their schools' grade as well (Berger, 2006).

Over the last 15 years, teachers have become more stressed than people in other professions (Hepburn & Brown, 2001). The majority of research on high-stakes testing and teachers reports a negative impact on teachers (Jones, Jones, & Hargrove, 2003). These impacts include changing teachers' delivery of instruction from collaboration and higher-order thinking activities to a more standardized pre-packaged approach to teaching (Kohn, 2000).

Literature further indicates that teaching is a high stress occupation not only in America but also throughout the world, so much so that the international community has begun to research teacher-related stress. Research from many countries reveals pervasive concern about the effects of stress on teachers' health and eagerness to stay in the profession (Kyriacou, 2001). The variables related to stress include disciplinary problems, lack of administrative support,

decreased autonomy, excessive paperwork, intimidating inspection regimes, unrealistic deadlines, and accountability for student performance (Hughes, 2006). Teachers describe themselves as anxious, overwhelmed, and apprehensive. They are concerned about %meeting the mounting needs of troubled students, doing justice to an all-consuming curriculum, and getting kids ready for a relentless series of tests+(Black, 2003, p.1). Understandably, the resultant stress can make teachers feel anxious and emotionally distressed.

High levels of teacher stress have been shown to affect classroom performance and personal lives. Guglielmi and Tatrow (1998) reported that a growing number of studies are beginning to show that teacher stress levels are higher than those of the general population, and that teachers report significantly higher levels of depression and job dissatisfaction than those in other professions. Teacher stress is a growing hazard in this country and is linked to problems in recruitment, personal health, and retention in the profession. Naylor (2001) found that stress eroded a teacher's enthusiasm, idealism, and purpose. Among secondary teachers, these feelings of stress lead to feelings of doubt, a loss of ideals, and ultimately the risk of burnout; this is occurring at a time when it is becoming increasingly difficult to retain people in the profession (Ashton, 1996; Lynch, 1999). The school system itself can be negatively affected by poor teacher performance, absenteeism, and high turnover rates (Hughes, 2006).

The effects of constant stress can be seen in many American secondary schools. Corbett and Wilson (1991) reported that teachers in a high-stakes testing environment suffered from stress and undue pressure as well as the loss

of job satisfaction. It has become apparent that many teachers, trying to cope with feelings of inadequacies due to high-stakes testing, little time to perform their jobs, and lack of control over administrative issues, have become cynical, apathetic, and overly rigid, resulting in symptoms of depression and fatigue (Black, 2003). Additionally, Black (2003) stated that anxious teachers often succumb to emotional and physical exhaustion, develop negative attitudes towards students and colleagues, and perform below par in the classroom. Such stress has a rippling effect in a building and school district. School districts with high levels of teacher stress also report high levels of teacher absenteeism, not only at the end of the school year, but at the beginning as well.

Teacher stress is often cited as a major cause of the teacher shortage, not only because of the difficulty in recruiting new teachers, but also because of the challenge of keeping them once they are hired (Hughes, 2006). Although there has been no statistically significant connection made between teacher stress and abandonment of the profession, earlier data indicated that those who leave teaching often cite the stressful nature of the job as affecting their longevity (Esrig, 1987; Harris, Kagay, & Leichenko, 1986; Schonfeld, 1990). Harris, Kagayand, Leichenko (1986) revealed that 30% of teachers leave teaching within 3 years. Among the reasons for leaving, teachers cited the stressful nature of their jobs affecting their longevity. Hughes (2006) added the continued accumulation of stress might have an effect on a teacher's classroom instruction, personal life, health, and, more importantly, the students the teacher serves.

Teacher stress is a growing hazard in education and is associated with problems of recruitment, health, and retention in the profession. Because teaching has become an increasingly stressful occupation characterized by an overload of responsibilities, poor career structure, and inadequate salary, it has become harder and harder to recruit and keep teachers in the profession (Hughes, 2006). According to Tye and O'Brien (2002), experienced teachers who had already left the profession ranked the pressures of increased accountability (high-stakes testing, test preparation, and performance standards) as their number one reason for leaving.

The exit rate of teachers from urban schools is almost twice as high as the suburbs, with 50% of new teachers leaving the field within 5 years (Morrow, 1999). The statistics are eye opening. Hughes (2006) found that of every 100 new graduates with licenses to teach, 30 never even take a teaching position. Of those who do choose to enter the profession, an estimated 30% leave the field within 5 years. In cities, the exit rate is as high as 50%. Discussion of the results of several studies indicated that teachers report significantly higher levels of depression and job dissatisfaction than those in other professions. In addition, the researcher correlated these data with information on teacher survival data, finding that only 70% of teachers remain in the profession after 3 years (Hughes, 2006).

Veteran teachers are leaving at an alarming rate as well. A study by Bracey and Molnar (2003) concluded that high-stakes testing has not only increased the number of teacher retirements, it has also increased the number of teachers who

leave the profession sooner than expected. Research also reports that veteran teachers experience more significant consequences from high-stakes tests than their beginning peers (Rex & Nelson, 2002; White, Sturtevant, & Dunlap, 2003).

This has increased the number of teacher vacancies and increased the difficulty in hiring new teachers. Veteran teachers, who left the profession, when asked, cited pressures from high-stakes testing as the primary reason for their departure (Hughes, 2006). Some veteran master teachers seek reassignment to schools with fewer minority students and fewer students from low-income families. They opt to transfer to schools with high student performance on standardized tests (Tye & O'Brien, 2002). Because they are veteran teachers, they seldom have a problem making such changes, but this leaves novice teachers to face the more challenging task of educating at-risk students, which, sadly, leads to stress.

The purpose of this study was to examine the stress levels of teachers with and without standardized testing responsibilities to determine if veteran teachers experience more stress than novice teachers due to high-stakes testing.

CHAPTER III

METHODOLOGY

Overview

Kyriacou (2001) recommended that researchers study the relationship between teacher stress and school reform. The most recent and relevant school reform initiative to date is accountability mandates and high-stakes testing. With the inception of NCLB and increased accountability mandates, teacher stress levels have advanced.

Teaching in a secondary setting has historically been stressful because teachers must deal with disruptive students, diverse student needs, and the ever-increasing pressure of a technology driven culture. Stress for secondary teachers is commonly associated with expectations for student performance and is cited as one of the major reasons teachers leave the field and have diminished job satisfaction and lower morale (Wilson, 2002).

The research design of this study was descriptive and quantitative in nature. It sought to determine the relationship between stress and high-stakes testing and self-efficacy in secondary teachers who teach in a state mandated tested area. It was carried out through the dissemination, collection, and analysis of a questionnaire to secondary teachers. A pilot study was performed to assess the validity and reliability of the questionnaire. Permission was requested from the school district to conduct the study. The population of the study consisted of a voluntary sample of secondary teachers in an urban school district. Teachers in

core or state tested subjects were surveyed as well as teachers who did not teach core subjects.

Setting

According to Jackson Public School District's website, it is the largest school district in the state of Mississippi with a student enrollment of over 31,000. The district has eight high schools and 10 middle schools. Demographic data for the school district for the 2006-2007 school year were characterized by race, gender, and socioeconomic status (SES). The data was reported in percentages as follows:

1. Race: . African American . 97.51%, Caucasian - 1.83%,
Hispanic - .45%, Asian - .18%, Native American . .03 %;
2. Gender: male - 49.8% and female . 50.2%; and
3. SES: 75% free lunch, 6.4% reduced amount, and 17.9% full price.

Population

The population of this study consisted of teachers who teach grades 6-12 in the 18 urban secondary schools in a public school district in Mississippi. This school district was chosen because it contains schools on every performance level that the state has identified. The district also has teachers who range from a few months of experience to 30 plus years of experience.

Research Questions

This study was guided by the following research questions that were measured from a research survey:

1. Do teachers who teach subjects tested by high-stakes tests have more stress than those teachers who do not?
2. Does self-efficacy affect a teacher's stress level as it relates to high-stakes testing?
3. Do years of teaching experience affect a teacher's stress levels as related to high-stakes testing?

To that end, the following hypotheses were tested through the use of a research survey:

- H1. There is a significant difference in the stress levels of teachers based on their school's assigned level of performance.
- H2. There is a significant difference between the stress levels of teachers who teach subjects that are measured by high-stakes testing and those who teach subjects that are not.
- H3. There is a significant difference between the stress levels of veteran teachers and novice teachers.

Procedures

Permission to conduct this study was first procured from the Internal Review Board at the University of Southern Mississippi (Appendix B). Permission to conduct the study in the select school district was then requested by contacting the Director of Accountability and Research of the public school district (Appendix C). Upon district approval, principals from each secondary school were contacted either via email or letter and asked for permission to give the survey during a faculty meeting. Each school was required to have at least one

faculty meeting per week. It was explained in the letter that the survey should take no more than 5 minutes to complete and that it was totally anonymous. Surveys were in an envelope and given to the principals just prior to the faculty meeting. Each teacher received a survey along with an introductory letter and an explanation of the survey and its purpose. After completion, the surveys were left in a place designated by the principal and picked up by the researcher after the faculty meeting was over.

Instrumentation

A 19-item research questionnaire, The High-Stakes Testing and Self-Efficacy on Teacher Stress Survey, designed by the researcher, was developed to measure the stress and self-efficacy levels of teachers in secondary schools. It was developed by perusing current literature on high-stakes testing, teacher stress, and self-efficacy, then forming questions to measure each variable. A panel of experts that included a university professor, a principal, and a veteran teacher, first reviewed the survey for face validity.

Once the survey was approved, it was piloted in a school district (Appendix A) using 15 participants. Participants recorded responses on a 5-point Likert scale (0 = never; 1 = almost never; 2 = sometimes; 3 = fairly often; and 4 = very often) and rated each item related to stress, self-efficacy, and high-stakes testing. Cronbach's alpha statistical analysis was used to test reliability. The alpha for stress was equal to 0.857 and for self efficacy it was 0.730. These respondents were not part of the study that followed.

Data Analysis

The data was analyzed using SPSS. After reviewing frequencies and descriptive statistics for each item (e.g., mean, standard deviation, standard error or measurement), a *t*-test for independent samples was used to compare the difference between the mean scores of the groups. One-way ANOVAs were run as well. Significance was set at the .05 level of confidence.

CHAPTER IV

RESULTS

The survey was sent to five secondary schools, three middle and two high schools. Sixty surveys were sent to each school, which represents a total of 300 (N = 300) surveys. One hundred forty-one surveys were returned, representing 47% of the total number (N = 300) sent to the schools.

The number of females who responded to the survey was 103 (73%) while the number of male respondents was 38 (27%). According to responses by age category, the largest number of responses came from the age group 30-49 years (30.5%) and the lowest number of responses per age group was in the category of 60+ years (8.5%). Table 1 contains detailed information for gender and age categories by frequency and percent of total responses.

Table 1

Age and Gender

Variable		Frequency	Percent
Gender	Male	38	27.0
	Female	103	73.0
Age	21-29	36	25.5
	30-39	43	30.5
	40-49	26	18.4
	50-59	24	17.0
	60+	12	8.5

According to the survey data, 77 (56.4%) respondents taught a core or tested subject area, 35 (24.8%) taught non-core or elective subject areas, and 28 (19.9%) taught core, but not state-tested subject areas, at the given grade level. The number of respondents reporting years of teaching experience at 0 to 5 years was 59 (41.8%) and for 6 years and above 80 (65.7%). Data reported by degree level revealed that most teachers in the study had a master's degree. 62 (44%) followed closely by bachelor's degree. 56 (41.8%). Only 4 (2.8%) respondents had a doctorate degree. Table 2 contains detailed information of subjects taught, teaching experience, level of teacher education (highest degree held), and school level.

The questionnaire/survey consisted of 19 items with questions to gauge how teachers felt about high-stakes testing, stress, and self-efficacy. The responses were set up on a 5-point Likert scale with 0 = *never*, the lowest; 1 = *almost never*; 2 = *sometimes*, 3 = *fairly often*, and 4 = *very often*, the highest. The mean and standard deviation of the responses for each comment included in the survey were calculated and then the comments were ranked by mean scores from highest (very often) to lowest (never).

Survey questions dealing with self-efficacy, questions 13 (M = 3.31)- necessary teaching skills, 11 (M=3.13)-personal satisfaction about job performance, and 16 (M = 3.12) - reaching students, were the most agreed upon by respondents. On the other hand, the survey questions dealing with stress, 6 (M = 1.27)-losing sleep, 4 (M = 1.14) - feel like giving up when preparing students for tests, and 3 (M = 1.10) - feel like giving up when administering the tests, were

the least agreed upon by respondents. Table 3 contains descriptive statistics for self-efficacy and Table 4 contains descriptive statistics for stress.

Table 2

Teaching Experience and Education Level

Variable		Frequency	Percent
Subject	Core or Tested Area	77	56.4
	Non-Core or Elective Area	35	24.8
	Core, but not tested at this grade level	28	19.9
Teaching Experience			
	0-5 years	59	41.8
	6-or more years	80	56.7
Degree	Bachelor's	56	39.7
	Master's	62	44.0
	Specialist	19	13.5
	Doctoral	4	2.8
School Level *2		44	31.2
	3	95	67.4

(*Level 2 = low performing, level 3 = successful)

Table 3

Descriptive Statistics for Self-Efficacy (N = 300)

	Mean	Std. Deviation
Q-13. My teaching experience has given me the necessary skills to be an effective teacher.	3.31	.93
Q-11. I feel a great sense of personal satisfaction about my job performance even though there is high-stakes testing at my school.	3.13	.94
Q-16. An effective teacher will reach my students.	3.12	.91
Q-19. I have experienced success in preparing my students for high-stakes testing.	2.88	.91
Q-18. With concerted effort, I can get through to my most difficult students.	2.88	.91
Q-12. My teacher training program has given me the necessary skills to be an effective teacher.	2.18	1.26
Q-15. There is a direct correlation between my effort and student achievement on high-stakes tests.	2.77	1.06
Q-10. My school's performance level does affect the amount of stress I feel.	2.03	1.38
Q-14. Teachers do not influence their students' achievement level.	1.99	1.51
Q-17. An effective teacher will not reach my students.	1.65	1.15

Scale: 0=Never 1= Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

Table 4

Descriptive Statistics for Stress (N = 300)

		Mean	Std. Deviation
Q-7	I feel stress from my building principal to raise scores on high-stakes tests.	2.72	1.28
Q-1	When my students begin taking a state mandated test, I feel very nervous.	2.14	1.25
Q-5	When it comes to preparing my students for high-stakes testing, I sometimes feel the bar is set so high, I cannot ever reach it.	1.48	1.23
Q-9	My school's performance level does not affect the amount of stress I feel.	1.48	1.19
Q-8	At times I feel like quitting teaching because of high-stakes testing.	1.43	1.39
Q-2	Thinking about high-stakes testing keeps me up at night.	1.35	1.32
Q-6	I feel stress from parents to earn a passing score on state mandated tests.	1.27	1.28
Q-4	I sometimes feel like giving up when preparing my students for a high-stakes test.	1.14	1.18
Q-3	I sometimes feel like giving up trying when it is time to give my students a high-stakes test.	1.10	1.14
Scale: 0=Never 1= Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often			

Test of Hypothesis

Hypothesis 1 stated: There is a significant difference in the stress levels of teachers based on their school's assigned level of performance. Teachers from schools with a level 2 rating scored the lowest with a mean of 1.51 and a

standard deviation of .89. Teachers from schools with a level 3 rating had a mean score of 1.63 and a standard deviation of .85. Hypothesis 1 was rejected because $F(1,137) = .589, p = .440$. It was not significant.

Hypothesis 2 stated: There is a significant difference between the stress levels of teachers who teach subjects that are measured by high-stakes testing and those who teach subjects that are not. Teachers in non-core (non-tested) areas had the highest mean score of 1.69 with a standard deviation of .98. Teachers in core (tested) areas had a mean of 1.45 and a standard deviation of .77. Hypothesis 2 was rejected because $F(1,110) = 1.62, p = .206$; thus, it was not significant.

Hypothesis 3 stated: There is not a significant difference between the stress levels of veteran teachers and novice teachers. Novice teachers had the lowest mean score of 1.49 with a standard deviation of .81 while veteran teachers had a mean of 1.64 with a standard deviation of .92. Hypothesis 3 was rejected because $F(1,137) = 1.01, p = .317$; thus, it was not significant.

Comments.

Most respondents' comments were negative towards testing and the stress and responsibility high-stakes testing created. About 20 respondents wrote comments. The comments included:

1. % Subject area teachers often experience burnout. The need to teach information to students in 9 short months that should have been an ongoing process is overwhelming. Teachers aren't given the needed

support when students fair poorly. These teachers are given additional stressors but zero support.+

2. %Too much time [is spent] testing and not enough time for teaching. The teacher doesn't make decisions, but are [sic] left with the guilt when the students fail.+
3. %This whole testing thing has everyone on edge. If the students don't perform well we all suffer and that's [sic] crazy to put such stress on the teachers. If the student doesn't want to do well it only reflects on that teacher. The teacher didn't prepare his student enough. Then, the principal gets onto the teacher for their lack of effort.
4. %Teachers are stressed because they know the child's limitations but they are also limited at what they can do in and within the time frame they are given.+

CHAPTER V

DISCUSSION

Introduction

The topic of teacher stress is not new; in fact, it has been the topic of research for more than 30 years (Kyriacou & Sutcliffe, 1997). More recent research (Adams, 1999; Kotrlik, 2003; Schonfeld, 1990) has studied teacher stress in the United States and found it to be higher than the general population's level of stress. This growing problem in the field of education has raised red flags. In fact, stress is cited as the one factor in the teaching profession that has led former teachers to seek employment in other fields and veteran teachers to opt for an early retirement (Harris et al., 1986; Lynch, 1999).

A Nation at Risk (Long, 1983) began modern educational reform which was the beginning of America's educational accountability system. No Child Left Behind (2001) legislation upped the stakes which led to an accountability system requiring federally mandated high-stakes testing and adequate yearly growth among students. The federal government pressured states, which in turn pressured local school districts, which in turn pressured principals who in turn pressured teachers. Such pressure has put local school districts and teachers of tested areas under increased scrutiny. This has led most states to adopt what is known as high-stakes testing. These tests are used to evaluate the level of school performance, evaluate teachers, and measure a school's progress.

This study was conducted to examine the effects of high-stakes testing on the stress and efficacy levels of secondary teachers. Such all or nothing tests

are believed to give an unusual amount of stress to teachers. This study sought to explore if, in fact, high-stakes testing has strained teachers and/or reduced their self-efficacy.

Conclusions and Discussions

The results of this study were in some ways surprising and in others expected. For instance, Hypothesis 1 stated that there would be a significant difference between the stress levels of teachers based on whether or not their school was rated as failing by the state based on test scores. According to the analysis of quantitative data collected in this study, a school's rank did not add to teacher stress. This was unexpected because of the perceived pressure that is placed on lower ranked schools.

This study also shows that teachers who teach in tested areas do not experience more stress than those who do not. This result was unexpected because teachers who teach tested areas are under constant scrutiny from the federal government, to state and local government, to their local communities, superintendents, and principals. One would think that such emphasis would increase the pressure on teachers of high-stakes tested areas to perform (Lambert, 2002; Smith, 1991), but according to this study, stress levels for teachers were low.

Another surprising result was that there was no difference between the stress levels of novice teachers and veteran teachers. Studies show that as many as 50% of new teachers leave the field within 5 years (Morrow, 1999). It does, though, coincide with Bandura's (1994) research which theorized that

people with high levels of self-efficacy experience lower levels of stress. The respondents in this study (both new and veteran) reported to have high levels of self-efficacy (Q-13: $M=3.31$ and Q-11: $M=3.13$), which explains why younger teachers are not more stressed than veteran teachers.

The quantitative analysis of the data presented in this study did not support that teachers were experiencing stress due to high-stakes testing. However, approximately 20 (7%) of the 300 survey respondents also provided comments centered around common themes including %Teachers are experiencing burnout,+ %Too much time is spent testing and (there is) not enough time for teaching,+and %Teachers are not given the needed support when students fair poorly.+

Limitations

The research population was limited to one school district in the state of Mississippi. Although this district has 17 secondary schools, the district limited this study to only 5 of the schools. The study was also limited to respondent perceptions, which may or may not have been skewed because of the days\$ activities when the survey was administered. Since the quantitative data analyzed in this study did not show a high level of teacher stress as a result of high stakes testing and the qualitative data did not support this decision, perhaps the particular instrument used in this study did not clearly communicate the questions being assessed.

Recommendations for Policy or Practice

There has been enough research done to support the fact that teachers encounter high levels of stress. Based on the findings of this study, there seems to be a need for school districts to combat teacher stress, especially in veteran teachers. Because of the demand for highly qualified teachers, reducing teacher stress because of high-stakes testing should be a priority. Although most teachers reported a high efficacy level, the amount of stress shown is a problem that needs to be addressed. Since high-stakes testing is not going away, workshops should be given to help teachers learn coping mechanisms.

To that end, school districts should provide workshops and in-service programs to teach teachers stress management techniques. These programs should also be differentiated to meet the needs of individual teachers. Veteran teachers and novice teachers do not necessarily have the same types of stress and would probably benefit from different coping and stress relief mechanisms.

Recommendations for Future Research

This study provided insight into teacher stress associated with high-stakes testing in secondary schools. According to the findings of this study, there are other areas that need further research. Future studies should compare the perceived stress levels between inner-city districts to rural districts. Future studies should also compare the perceived stress levels between secondary teachers and elementary teachers. This study should also be replicated between states to see if there is a difference between the stress levels of teachers who

work in states with high rankings versus states with low rankings. Finally, further research should explore how teachers are coping with the stress of teaching.

APPENDIX A:

PILOT STUDY

High-Stakes Testing and Self-Efficacy on Teacher Stress

Pilot Study

This teacher survey /pilot study/ is being conducted as part of my doctoral research investigating the effects of high-stakes testing and self-efficacy on stress in secondary teachers. Your participation in the survey is completely voluntary. All responses are anonymous and confidential. No specific individuals, school, or districts will be identified from the data. The survey should take approximately 5 minutes to complete.

By completing this survey, you agree that you have read the attached cover letter that described informed consent and have been given an opportunity to have any questions answered. Please return the survey to the site assigned by your principal. Your comments and suggestions will assist in the improvement of the High-Stakes Testing and Self-Efficacy on Teacher Stress Survey.

The following are a number of questions that ask you about high-stakes testing, self-efficacy, and teacher stress. Please read each statement carefully and circle the most appropriate number on the following 4-point scale to indicate your agreement with all items.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820."

0=Never	1= Almost Never	2 = Sometimes	3 = Fairly Often	4 = Very Often	
1. When my students begin taking a state mandated test, I feel very nervous.	0	1	2	3	4
2. Thinking about high-stakes testing keeps me up at night.	0	1	2	3	4
3. I sometimes feel like giving up trying when it is time to give students a high-stakes test.	0	1	2	3	4
4. I sometimes feel like giving up when preparing my students for a high-stakes test.	0	1	2	3	4
5. When it comes to preparing my students for high-stakes testing, I sometimes feel the bar is set so high, that I can not ever reach it.	0	1	2	3	4
6. I feel stress from parents to earn a passing score on state mandated tests.	0	1	2	3	4
7. I feel stress from my building principal to raise scores on high-stakes tests.	0	1	2	3	4
8. At times I feel like quitting teaching because of high-stakes testing.	0	1	2	3	4
9. My school's performance level does not affect the amount of stress I feel.	0	1	2	3	4
10. My school's performance level does affect the amount of stress I feel.	0	1	2	3	4
11. I feel a great sense of personal satisfaction about my job performance even though there is high-stakes testing at my school.	0	1	2	3	4
12. My teacher-training program has given me the necessary skills to be an effective teacher.	0	1	2	3	4
13. My teaching experience has given me the necessary skills to be an effective teacher.	0	1	2	3	4
14. Teachers do not influence their students' achievement levels.	0	1	2	3	4

15. There is a direct correlation between my effort and student achievement on high-stakes tests.	0	1	2	3	4
16. An effective teacher will reach my students.	0	1	2	3	4
17. An effective teacher may not reach my students.	0	1	2	3	4
18. With a concerted effort, I can get through to my most difficult students.	0	1	2	3	4
19. I have experienced success in preparing my students for high-stakes tests.	0	1	2	3	4

Comments

If you would like to offer any comments about the relationship between high-stakes testing, self-efficacy, and teacher stress, please write them in the space provided.

Pilot Study

Feedback Response Section

Please identify any statements you found to be confusing by marking an asterisk next to the statement in question.

Please reword any statements you found to be unclear in the space provided below.

There were enough items so that I felt I could fully express my feelings about stress and high-stakes testing and self-efficacy.

_____ Yes

_____ No,(if no, please explain)

There were items on the survey I found to be off task.

_____ Yes, (if yes, please indicate which item(s))

_____ No

Demographic Questionnaire

Please check the appropriate item.

1. Gender Male _____ Female _____

2. Age 21-29 _____
 30-39 _____
 40-49 _____
 50-59 _____
 60+ _____

3. What subject do you teach? _____ Core or Tested area
 _____ Non-core or Elective area
 _____ Core, but not tested at this grade level

4. Years of teaching experience 0-5 _____
 6-Above _____

5. Highest degree earned Bachelor's _____
 Master's _____
 Specialist _____
 Doctorate _____

6. What level is your school? Level 1 _____
 Level 2 _____
 Level 3 _____
 Level 4 _____ Level 5 _____

APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL

APPENDIX C

LETTER TO THE SUPERINTENDENT

Sonya Colman Christian
3013 Marwood Drive
Jackson, MS 39212

Dr. Willie Johnson
Director, Accountability & Research
Jackson Public School District
P.O. Box 2338
Jackson, MS 39225-2338

Dear Dr. Johnson:

My name is Sonya Colman Christian and I am currently pursuing a doctorate in Educational Leadership from The University of Southern Mississippi. I have chosen to investigate if high-stakes testing raises the perceived stress levels of teachers who teach courses that are state mandate tested and if self-efficacy effects those perceived stress levels.

I am asking your permission to conduct research in the Jackson Public School District. This district was chosen because of the number of students the district serves and the diversity of the district as a whole. Surveys will be distributed to secondary school (middle and high) teachers during regularly scheduled faculty meeting times. A collection envelope will be left at the school for administrators or their designees to put finished surveys into. I will return to the school after the faculty meeting to collect surveys. Teachers will be asked to complete a 5 - 10 minute survey. Teacher participation is voluntary, thus refusing to participate or discontinuing participation involves no penalty. All responses will be anonymous and confidential. No specific individuals, schools, or districts will be identified in the data. Data will be used for group analysis. At the completion of the study, material collected for the study will be destroyed.

Questions concerning the research study should be directed to Sonya Colman Christian by phone at (769) 233-8315 or (586) 744-0861. Questions can also be directed by email @ schristian@jackson.k12.ms.us or scolman69@hotmail.com.

Thanking you in advance,

Sonya Colman Christian

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820."

APPENDIX D
LETTER TO THE PRINCIPAL

Dear _____:

I am doctoral candidate at the University of Southern Mississippi conducting research to determine if there is a difference in the stress levels of teachers who administer high-stakes tests and those who do not. Your school is one that has been selected to participate in the study. I am requesting assistance in making my research successful.

Enclosed is an example of the survey instrument that I would like to administer. I would like to take about 5 to 10 minutes of time during your faculty meeting to have teachers fill out the survey and return them to an area you designate. Teacher participation in the study is voluntary and anonymous, refusing to participate or discontinuing to participate does not carry a penalty. I will return to your school to pick up completed surveys after the faculty meeting. I would appreciate any help you could provide in hopes of attaining a 100% response rate on surveys completed in your school.

Questions concerning the research study should be directed to Sonya Colman Christian, at (769) 233-8315 or (586) 744-0861. My email address is schristian@jackson.k12.ms.us.

Thanking you in advance for your time and consideration,

Sonya Colman Christian

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820."

APPENDIX E

COVER LETTER TO TEACHER

Dear Fellow Educator:

I am a doctoral candidate at The University of Southern Mississippi conducting research to determine if teacher stress is related to high-stakes testing among secondary teachers. You were selected as a possible participant because of your knowledge and/or experience related to the topic. Your thoughts are important to the study. If you agree to be in the study, you will be asked to complete the High-Stakes Testing and Self-Efficacy on Teacher Stress Survey. I would appreciate your taking approximately 5 minutes from your extremely busy schedule to answer questions on the brief survey.

Your participation is completely voluntary with all responses anonymous and confidential. There will be no compensation for participation and refusing to participate or discontinuing participation will involve no penalty. The records of this study will be kept private. In any report of this study that might be published, the researcher will not include any information that will make it possible to identify a participant. No specific individuals, schools, or districts will be identified in the data. Upon completion of the study, materials collected for the study will be destroyed.

Questions concerning the research study should be directed to Sonya Colman Christian @ (586) 744-0861 or through email at schristian@jackson.k12.ms.us.

If you choose to complete this survey, remove this cover letter and return the survey to the place designated by your principal. Please complete and return the survey by the closing date of _____.

I greatly appreciate your participation,

Sonya Colman Christian

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820."

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